NOTE XVII.

ON A COLLECTION OF FISHES FROM THE ST. PAUL'S RIVER, LIBERIA, WITH DESCRIPTION OF THREE NEW SPECIES.

BY

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In Note XIV the object of the expedition of Messrs. Büttikofer and Sala to W. Africa has been traced by Prof. Schlegel and it may here suffice to repeat that during their first year's stay they principally explored the banks of the St. Paul's river in Liberia.

In this river the following freshwater fishes were collected:

Chromis mossambicus.

Of this species, with which Steindachner has been able to identify several nominal species, reducing the known African Chromides to two species: *C. niloticus* and *C. mossambicus*, seventeen specimens of different sizes were collected. They all range within the limits of variation fixed by Dr. Steindachner. The vernacular name is *Uo*, which is applied to *Hemichromis fasciatus* as well.

Accepting the conclusions of Steindachner above alluded to I have however to describe a new species which is different from both.

***Chromis buttikoferi* n. sp.**

The length of the head is contained three times and

two fifths in the total length (without caudal), the height of the body twice and one fourth. The teeth are more considerable in size and smaller in number than in either of the two species above mentioned, there being only ten teeth on each side in the upper and five in the lower jaw. From five to six series of scales on the cheek below the eye; thirty scales in a straight line from the opercle to the caudal; four longitudinal rows of scales above and ten below the lateral line. The fin-formula is *D.* $^{15}/_{15}$; *A.* $^{3}/_{10-11}$; the pectoral fin does not extend to the anal.

There are eight black transverse bands: the first across the eyes, fainter than the succeeding ones; the second across the nape and opercle, being continued on the belly before the pectorals; the third commences at the beginning of the spinous dorsal, runs behind the pectoral to the root of the ventral; the fourth, fifth and sixth from the dorsal fin to the belly, the fifth attaining the vent and the beginning of the anal, the sixth descending to the posterior half of the anal. Each of the four last-named bands has a width of from three to four scales, the light space between them is only one or two scales wide. The seventh and eighth transverse band occupy the free portion of the tail; the space between them is even smaller and sometimes they appear to coalesce. The root of the caudal fin and a transverse band across its extremity are light-coloured; the intervening surface is blackish. Bands four, five, six and seven are continued on the vertical fins: this is more conspicuous in young than in older individuals where the dark colour spreads over the whole of the fins. The pectorals are dark-coloured, the ventrals black with the outer elongated ray white.

The above description will suffice to show that the specimens in question are indeed specifically different both from *C. niloticus* and *C. mossambicus*, the two species to which Steindachner has reduced all those that were hitherto described from Africa. The pectoral fin never attains to the length which characterizes that of *C. niloticus*; the teeth

are of larger size and less in number than in either of the two other species referred to. The fin-formula is also constantly different; of the three specimens two have: *A.* $^{3}/_{11}$, one: *A.* $^{3}/_{10}$; all agree in having fifteen soft rays in the dorsal.

The transverse bands are also differently distributed: they are continued down to the inferior margin of the belly and never bend backwards in their dorsal half as I find they do in all the specimens of *C. mossambicus* I was able to examine. Moreover the distribution of colours on all the vertical fins appear to be different, as is the dark colour of the belly in front of the pectorals. Of even more importance is the large number of rows of scales under the eye; though generally five, I count six rows on one cheek of one of the specimens.

Gea is a vernacular name which together with *Uo* appears to be indifferently used for different species of *Chromis* and *Hemichromis*, also to the one here described.

Hemichromis fasciatus.

Ctenopoma petherici.

Three specimens. Vernacular name *Can.*

***Clarias salae* n. sp.**

This species differs from the other African representatives of the genus by the following constant characters. The dorsal fin has from 89 to 91 rays, the anal from 70 to 74, a larger number than is found in any of the other species. In old specimens the length of the head is contained six times and a half in the length of the body; in young ones five times and a half. The caudal fin is contained once and a half in the length of the head. The anal fin terminates just a little in front of the end of the dorsal. The extremity of the pectoral fin is separated from the beginning of the dorsal by an interspace equal to half its length. In adult specimens the upper surface of the

head is finely granular. The maxillary barbel, when not mutilated, reaches as far as the end of the pectoral, the nasal barbel as far as the posterior border of the occipital fontanel.

The colour in life is dark green with a small number of minute yellow dots placed in more or less regular transverse rows.

The vernacular name is *Soa*.

Malapterurus electricus.

This fish rarely exceeds one foot in length and is more common in the small creeks communicating with the St. Paul's river than in the river itself. About thirty specimens were collected; even of the small specimens the shocks can be very painfully felt.

Vernacular name: *Dobbo*.

Eutropius adansonii.

This species, the vernacular name of which is *Fada*, appears to be only caught at twilight.

***Eutropius liberiensis* n. sp.**

Closely allied to the foregoing species from which it differs both in the coloration and in the number of rays in the anal fin. Steindachner has fixed this number for *E. adansonii* at from 56 to 58, whereas in *E. liberiensis* there are only 50 rays. The formula for the dorsal and pectoral fins is D. $^1/_5$; P. $^1/_{10}$.

There are four dark longitudinal bands, one along the back, one above and one below the lateral line, the two latter only separated by a narrow silvery interspace, one from the pectoral to the caudal. The whole surface of the body is covered with minute dark dots which stand closer together along the dark longitudinal bands. There is a faint black blotch above the pectoral. The exterior border of the anal is not black as in *E. adansonii* but lighter than the inner half.

The adipose fin appears to be a little more developed than in *E. adansonii*.

Only one specimen of this species was captured: in a specimen of *E. adansonii* of about the same size there was no trace either of bands or punctuation.

Chrysichthys nigrodigitatus.

Vernacular name: *Poulet.*

Alestes macrolepidotus.

Vernacular name: *Fulu* or *Fru.*

Brachyalestes nurse.

Vernacular name: *Péré*, also applied to the following species.

Brachyalestes longipinnis.

Five specimens.

Hydrocyon forskalii,

Vernacular name: *Cuécess.*

Mormyrops deliciosus.

Vernacular name: *Babéré.*

Mormyrops henryi.

This species was hitherto only known from a description of Gill based upon a specimen in the Philadelphia Museum. He made it the type of a new genus *Isichthys*, which has afterwards been united with *Mormyrops* by Günther. The locality from whence this specimen had come could however no more be traced, although Gill states that he is disposed to believe that it was collected in Liberia (Proc. Ac. Nat. Sc. Philad. 1862, p. 444). This suggestion is now confirmed by the second specimen on record which has indeed been captured in the St Paul's river by our travellers.

Notopterus afer.

The groundcolour in life is dark green, the spots are yellowish.

Vernacular name: *Dada.*

The following fishes were collected in brackish water at the mouth of the Messurado river:

Pristipoma jubelini.

Gerres melanopterus.

Psettus sebae.

Four specimens of

Balistes maculatus

were captured in the Atlantic ocean as they were following in a shoal a log of driftwood and feeding upon the specimens of *Lepas* attached thereto.